

ECS Configuration Change Request

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Page(s)

1. Originator Mike Hood	2. Log Date: 8 MAY 00	3. CCR #: 00-0506	4. Rev: 00	5. Tel: 301-925-0472	6. Rm #: 2108F	7. Dept. AO
8. CCR Title: Update Ticket RM_5B_13, Update ESDT						
9. Originator Signature/Date <i>M. W. Hood 5/8/00</i>		10. Class II	11. Type: CCR	12. Need Date: 5/10/00		
13. Office Manager Signature/Date <i>Valecia D. Maclean for CW 5/8/00</i>		14. Category of Change: VDB		15. Priority: (If "Emergency" fill in Block 28). Emergency		
16. Documentation/Drawings Impacted: Verification Data Base (VDB)		17. Schedule Impact: None		18. CI(s) Affected: None		
19. Release Affected by this Change: 5B		20. Date due to Customer: 5/10/00		21. Estimated Cost: None - Under 100K		
22. Source Reference: <input type="checkbox"/> NCR (attach) <input type="checkbox"/> Action Item <input type="checkbox"/> Tech Ref. <input type="checkbox"/> GSFC <input checked="" type="checkbox"/> Other: VDB						
23. Problem: (use additional Sheets if necessary) Criteria 1497 addresses References Descriptors. This functionality is not part of drop 5B, but 6A						
24. Proposed Solution: (use additional sheets if necessary) Update ticket RM_5B_13 according to attachment.						
25. Alternate Solution: (use additional sheets if necessary) None						
26. Consequences if Change(s) are not approved: (use additional sheets if necessary) Criteria will be incorrectly assigned to a drop.						
27. Justification for Emergency (If Block 15 is "Emergency"): VDB needs to be up-to-date by CSR, which is scheduled for May 11, 2000.						
28. Site(s) Affected: <input type="checkbox"/> EDF <input type="checkbox"/> PVC <input type="checkbox"/> VATC <input type="checkbox"/> EDC <input type="checkbox"/> GSFC <input type="checkbox"/> LaRC <input type="checkbox"/> NSIDC <input type="checkbox"/> SMC <input type="checkbox"/> AK <input type="checkbox"/> JPL <input type="checkbox"/> EOC <input type="checkbox"/> IDG Test Cell <input type="checkbox"/> Other						
29. Board Comments:			30. Work Assigned To:		31. CCR Closed Date: 5/10/00 CB	
32. EDF/SCDV CCB Chair (Sign/Date): <i>Sydney T. Baker 5/9/00</i>		Disposition: <u>Approved</u> App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS				
33. M&O CCB Chair (Sign/Date):		Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ECS				
34. ECS CCB Chair (Sign/Date):		Disposition: Approved App/Com. Disapproved Withdraw Fwd/ESDIS ERB Fwd/ESDIS				

CM01JA00

ECS/EDF/SCDV/M&O

ORIGINAL

05-08-00P01-24 0402

Latest CCR Affecting this Ticket: 99-1207
Latest CCR DATE Affecting this Ticket: 12/15/1999

Ticket : RM_5B_13 (With L4 Mappings)

Update ESDT

Launch Criticality: 5B

Review: SDSRV, ADSRV, DDICT, SBSRV

Priority: NO DATA

Number of Tracked Ticket Changes: 2

Ticket CCR Number*: 99-0826

Ticket CCR Date*: 09/08/1999

* Represents changes to information from Ticket table only. Does not include information linked in from other tables.

NOTE: The number of tracked changes (above) represents the number of changes to this particular Ticket. Whenever the data appearing in this Ticket changes this number is incremented by 1.

Preconditions:

~~The SDSRV must have been loaded with a 'Collection Reference Descriptor'.~~

~~— Prepare changes to the Collection Reference Descriptor that contains changes to attributes of Platform, Sensor, Campaign, Analysis Source, Contact, and Discipline Topic Keyword entities.~~

Prepare one descriptor embodying each of the following types of changes to currently installed descriptors, and one descriptor combining all these changes:

- * additional optional collection metadata,
- * additional optional inventory metadata including PSA,
- * additional services (choose service whose presence then can be verified),
- * additional events
- * new parameters added to an existing service
- * valid changes to values of single- and multi-valued collection level metadata
- * additional inventory level metadata valids
- * change of a mandatory attribute to optional

Prepare changed descriptors that violate valids

Prepare one descriptor each for updates to attributes that are not updateable: VersionID, InstrumentShortName, PlatformShortName.

The data server must contain more than one granule for every one of the ESDT being changed.

The subscription server must contain subscriptions that have been placed on events that are affected by the ESDT updates.

Comments:

This ticket includes the 5P and 5B capabilities. Some of the requirements for 5B are still being finalized; these have been highlighted below. The potential changes do not affect the basic operational scenario; they merely include additional types of ESDT changes. That is, it is expected that the preconditions and verification steps will change, but that the test scenario remains the same otherwise.

Note: The L4 requirements listed below specify an additional type of change not mentioned above, namely new qualifiers on existing events. This condition is implicitly triggered by adding new optional inventory metadata to an ESDT that has insert defined as an event; it is not explicitly called out in the preconditions, therefore.

Development Capability(ies):

Cap ID	Title	Description	Change Date
01563DM	Update ESDT (update metadata/services)	The Data Dictionary shall be able to accept an update ESDT message from SDSRV in order to update collection metadata in the Data Dictionary database	08/11/1999
01563DT	Update ESDT (update metadata/services)	The SDSRV shall provide the capability to update Collection level metadata with granules existing in the inventory for that ESDT.	08/11/1999

12514II	Update ESDT (update metadata/services)	The SDSRV shall provide the capability to update Collection level metadata with granules existing in the inventory for that ESDT. This capability is limited to adding (only) metadata, services, and events	08/11/1999
12514ID	Update ESDT (update metadata/services)	The SDSRV shall provide the capability to update Collection level metadata with granules existing in the inventory for that ESDT. This capability is limited to adding (only) metadata, services, and events	08/11/1999

Level 3 Requirement(s):

L3 ID	L3 Text	Clarification	Category	Release	CCR Num
IMS-0355	The ECS metadata shall be expandable to include additional attributes which are identified during the mission and deemed useful for data search.	Current: delete and reinstall ESDT Future: (5B) actually update existing ESDT	SDSRV	5B Partial	99-0496

IRD Requirement(s):

NONE

Level 4 Requirement(s):

L4 ID	L4 Text	Release	CCR Num
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C-CSS-40276	The Subscription Service shall accept a command from the SDSRV CI to replace an event when an ESDT is updated by adding additional qualifiers to a previously registered event	5P	99-0729
C-CSS-40277	The Subscription Service shall be able to re-execute a replacement command whether or not a previous replacement command succeeded or failed.	5P	99-0729
C-CSS-40278	The Subscription Service shall return failure notification to the SDSRV CI if an event update is not successful.	5P	99-0729
C-CSS-40279	The Subscription Service shall pass replace event information in an ADSRV CI advertisement, using the ADSRV CI delete and insert interfaces .	5P	99-0729
C-CSS-40281	The Subscription Service shall accept and process advertisement failure notification from the ADSRV CI for ADSRV CI delete and insert interfaces.	5P	99-0729
C-CSS-40283	The Subscription Service shall preserve any existing subscriptions against events being replaced.	5P	99-0729
C-CSS-40285	The Subscription Service shall treat a request to insert an event as a request to replace the event if the event already exists	5P	99-0872

S-DMS-20161	The DDICT CI shall have the capability to accept updated data dictionary entries from the SDSRV CI Data Server.	5B	99-0729
S-DMS-24120	The DDICT CI shall accept the resubmittal of a previously failed update request.	5P	99-0729
S-DSS-06100	The SDSRV CI shall update ESDTs using the updated version of the ESDT files provided by operations staff.	5P	99-0729
S-DSS-06101	The SDSRV CI shall provide operations staff with the ability to update ESDTs by adding optional collection metadata, optional inventory metadata, services, events and new qualifiers on existing events.	5P	99-0729
S-DSS-06102	The SDSRV CI shall send a command to the ADSRV CI to replace collection metadata when an ESDT is updated by adding optional collection metadata.	5P	99-0729
S-DSS-06103	The SDSRV CI shall send a command to the DDICT CI to replace collection and inventory metadata when an ESDT is updated by adding optional collection metadata.	5P	99-0729
S-DSS-06104	The SDSRV CI shall send a command to the DDICT CI to replace collection and inventory metadata when an ESDT is updated by adding optional inventory metadata.	5P	99-0729

S-DSS-06105	The SDSRV CI shall send additional services to the ADSRV CI when an ESDT is updated by adding services.	5P	99-0729
S-DSS-06106	The SDSRV CI shall send additional events to SBSRV when an ESDT is updated by adding events.	5P	99-0729
S-DSS-06107	The SDSRV CI shall send a command to SBSRV to replace an event when an ESDT is updated by adding additional qualifiers to a previously registered event.	5P	99-0729
S-DSS-06108	The SDSRV CI shall provide operations staff with functionality in the SDSRV Operations GUI to install updated ESDTs.	5P	99-0729
S-DSS-06109	The SDSRV CI shall recover from and process the resubmittal of a partially completed ESDT update.	5P	99-0729
S-DSS-06110	The SDSRV CI shall prohibit the use of an ESDT that has partially completed ESDT update in any other service calls.	5P	99-0729
S-DSS-06111	The SDSRV CI shall validate the updated descriptor as part of the Update ESDT process.	5P	99-0729
S-DSS-06112	The SDSRV CI shall determine the changes to the updated descriptor as part of the ESDT Update process.	5P	99-0729

S-DSS-06113	The SDSRV CI shall notify operations staff if there are no differences in a descriptor as part of the ESDT process.	5P	99-0729
S-DSS-06114	The SDSRV CI shall disable all other services during the ESDT Update process.	5P	99-0729
S-DSS-06115	The SDSRV CI shall only accept ESDT update requests when the SDSRV is operating in a maintenance mode.	5P	99-0729
S-DSS-06120	The SDSRV CI shall provide operations staff with the ability to update ESDTs by changing a mandatory attribute to optional or updating single-valued collection metadata, multi-valued collection metadata, inventory metadata, attributes of collection-related entities and service signatures.	5B	99-0768
S-DSS-06121	The SDSRV CI shall maintain a list of attributes that can not be updated through the ESDT update process.	5B	99-0768
S-DSS-06122	The SDSRV CI shall reject attempts to update attributes that have been determined to be non-updateable to include ShortName and VersionID in the CollectionDescriptionClass Group, AdditionalAttributeName, AdditionalAttributeType, SensorCharacteristicName, SensorCharacteristicType, AnalysisShortName, CampaignShortName, InstrumentShortName, PlatformShortName, and SensorShortName.	5B	99-0768

S-DSS-06123	The SDSRV CI shall send a command to the ADSRV CI to replace collection metadata when an ESDT is updated by updating selected collection metadata.	5B	99-0768	
S-DSS-06124	The SDSRV CI shall send a command to the DDICT CI to replace collection and inventory metadata when an ESDT is updated by updating selected collection metadata.	5B	99-0768	
S-DSS-06125	The SDSRV CI shall send a command to the DDICT CI to replace collection and inventory metadata when an ESDT is updated by updating selected inventory metadata.	5B	99-0768	
S-DSS-06126	The SDSRV CI shall send a command to the ADSRV CI to replace services when an ESDT is updated by updating the service signature.	5B	99-0768	
S-DSS-06127	The SDSRV CI shall provide operations staff with the ability to install Platform, Sensor, Campaign, Instrument, Analysis Source, Contact, and Discipline Topic Keyword attributes by installing the Collection Reference Descriptor.	5B 6B	99-0768	Change the drop from 5B to 6B and remove the linkage of these L4s from this ticket.
S-DSS-06128	The SDSRV CI shall provide operations staff with the ability to update Platform, Sensor, Campaign, Instrument, Analysis Source, Contact, and Discipline Topic Keyword attributes by updating the Collection Reference Descriptor.	5B 6B	99-0768	They will be reassigned to a ticket at a later date. Do not delete the Level 4s.

S-DSS-06129	The SDSRV CI shall provide the operations staff with functionality in the SDSRV Operations Gui to install the collection reference descriptor.	5B6B	99-0768
S-DSS-06130	The SDSRV CI shall provide the operations staff with functionality in the SDSRV Operations Gui to update the collection reference descriptor.	5B6B	99-0768
S-DSS-06131	The SDSRV CI shall provide operations staff with the capability to update ESDTs.	5P	99-0768
S-IOS-00420	The ADSRV CI shall preserve existing advertisements when updating collection metadata.	5P	99-0729
S-IOS-00430	The ADSRV CI shall treat a duplicate add request for service advertisement data as a replace request.	5P	99-0729
S-IOS-00440	The ADSRV CI shall accept the resubmittal of a previously failed update request.	5P	99-0729

L4 to L3 Mappings:

L4 ID	L3 ID	CCR Num
C-CSS-40276	IMS-0350	99-0729
C-CSS-40277	IMS-0350	99-0729
C-CSS-40278	IMS-0350	99-0729
C-CSS-40279	IMS-0350	99-0729

C-CSS-40281	IMS-0350	99-0729
C-CSS-40283	IMS-0350	99-0729
C-CSS-40285	IMS-0350	99-0872
S-DMS-20161	IMS-0350	99-0729
S-DMS-20161	IMS-0355	99-0729
S-DMS-24120	IMS-0355	99-0729
S-DSS-06100	IMS-0355	99-0729
S-DSS-06101	IMS-0355	99-0729
S-DSS-06102	IMS-0355	99-0729
S-DSS-06103	IMS-0355	99-0729
S-DSS-06104	IMS-0355	99-0729
S-DSS-06105	IMS-0355	99-0729
S-DSS-06106	IMS-0355	99-0729
S-DSS-06107	IMS-0355	99-0729
S-DSS-06108	IMS-0355	99-0729
S-DSS-06109	IMS-0355	99-0729
S-DSS-06110	IMS-0355	99-0729
S-DSS-06111	IMS-0355	99-0729
S-DSS-06112	IMS-0355	99-0729
S-DSS-06113	IMS-0355	99-0729
S-DSS-06114	IMS-0355	99-0729
S-DSS-06115	IMS-0355	99-0729
S-DSS-06120	IMS-0355	99-0729
S-DSS-06121	IMS-0355	99-0729

S-DSS-06122	IMS-0355	99-0729
S-DSS-06123	IMS-0355	99-0729
S-DSS-06124	IMS-0355	99-0729
S-DSS-06125	IMS-0355	99-0729
S-DSS-06126	IMS-0355	99-0729
S-DSS-06127	IMS-0355	99-0768
S-DSS-06128	IMS-0355	99-0768
S-DSS-06129	IMS-0355	99-0768
S-DSS-06130	IMS-0355	99-0768
S-DSS-06131	IMS-0355	99-0729
S-IO5-00420	IMS-0355	99-0729
S-IO5-00430	IMS-0355	99-0729
S-IO5-00440	IMS-0355	99-0729

L4 to IRD Mappings:

NONE

Criteria:

Criteria Key	Criteria ID	Criteria Text	Type	CCR Num
1496	10	Using the SDSRV GUI, process prepared descriptor changes that exercise adding optional collection metadata, optional inventory metadata, services, events and new qualifiers on existing events. Verify the following: a. the SDSRV GUI can be used to request the installation of the ESDT updates. b. the GUI lets the operator select several	FC	99-0826

		<p>ESDT at once for update.</p> <p>e. the GUI displays confirmation of successful update.</p> <p>d. the ESDT changes were successfully processed and installed in the SDSRV, ADSRV, DDICT, and SBSRV.</p> <p>e. the inventory metadata for the existing granules remained intact.</p> <p>f. granules that make use of the changed ESDTs can be inserted.</p> <p>g. the event updates were successfully processed and installed in the SBSRV and ADSRV.</p> <p>h. the service updates were successfully processed and installed in the ADSRV.</p> <p>i. updated events retained the same event identifier. j. the previously existing subscriptions remained intact and fire during inserts performed after the ESDT updates are applied.</p> <p>k. the new services are indeed accessible</p>			
1497	20	Using the SDSRV GUI, process the prepared changes to the Collection Reference Descriptor. Verify that the changes are processed correctly and are reflected in the SDSRV.	FC	99-0826	Change the drop from 5B to 6B and remove the linkage of this criteria from this ticket. It will be reassigned to a ticket at a later date. Do not delete the criteria.
1498	30	Using the SDSRV GUI, use an unchanged descriptor for an ESDT update. Verify that the SDSRV GUI informs the operator that no changes were detected.	FC	99-0826	

1499	40	With the SDSRV in maintenance mode, verify that the SDSRV will reject search, acquire, and insert requests.	FC	99-0826
1500	50	Attempt to use the descriptors containing valid violations for updates. Verify that the ESDT update is rejected and appropriate error information is provided to the operator via the GUI or the application log file. Correct the valid violation and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826
1501	60	Attempt to process the descriptors containing updates to attributes that are non-updateable. Verify that the update attempt is rejected and that the ESDTs remain accessible in normal mode (i.e., that they have not been flagged as "invalid").	EC	99-0826
1502	70	Attempt to process a changed descriptor while ADSRV is down. The attempt should fail. Restart ADSRV and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826
1503	80	Attempt to process a changed descriptor while DDICT is down. The attempt should fail. Restart DDICT and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826

1504	90	Attempt to process a descriptor that includes changes to events as well as new events, while SBSRV is down. The attempt should fail. Restart SBSRV and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826
1505	100	Attempt to process a descriptor that includes changes to events as well as new events. Time an ADSRV failure to occur after the SDSRV exported its changes to the ADSRV, but before the SBSRV attempts to export its changes to the ADSRV. The attempt should fail. Then restart the ADSRV and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826
1506	110	Induce an SDSRV failure while it processes an ESDT update. Restart the SDSRV and resubmit the ESDT update. Verify that the update succeeds and was correctly processed.	EC	99-0826
1507	120	Warm start the SDSRV in non-maintenance mode after an ESDT update failed in maintenance mode. Verify that the warm restart succeeds. Attempt to access granules belonging to the ESDT whose update failed. Verify that the accesses fail with the correct error indication. Terminate the SDSRV and restart it in maintenance mode. Resubmit the ESDT update and let it complete successfully. Warm-restart the SDSRV in non-maintenance mode and verify that granules belonging to that ESDT can now be accessed.	EC	99-0826

1508	130	Induce an SDSRV failure while it processes an ESDT update. Restart the SDSRV and resubmit the original ESDT. Then restart the SDSRV in normal mode and attempt to access the descriptor. Verify that the descriptor is flagged invalid and cannot be used.	EC	99-0826

Test Case(s):

Criteria Key	Criteria Type	Test Case ID	Test Case Title	TC CCR Num	TC to CRIT CCR Num
1496	FC	5B08040	Update ESDT	99-1207	99-1207
1498	FC	5B08040	Update ESDT	99-1207	99-1207
1499	FC	5B08040	Update ESDT	99-1207	99-1207
1500	EC	5B08040	Update ESDT	99-1207	99-1207
1501	EC	5B08040	Update ESDT	99-1207	99-1207
1502	EC	5B08040	Update ESDT	99-1207	99-1207
1503	EC	5B08040	Update ESDT	99-1207	99-1207
1504	EC	5B08040	Update ESDT	99-1207	99-1207
1505	EC	5B08040	Update ESDT	99-1207	99-1207
1506	EC	5B08040	Update ESDT	99-1207	99-1207
1507	EC	5B08040	Update ESDT	99-1207	99-1207
1508	EC	5B08040	Update ESDT	99-1207	99-1207